SNOW SURVEYS AND IRRIGATION WATER FORECASTS

FOR OREGON

AS OF

MARCH 1, 1941

* * *

Issued March 9, 1941

by

Division of Irrigation, Soil Conservation Service
United States Department of Agriculture
and
Oregon Agricultural Experiment Station, Medford Branch
cooperating

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Data included in this report were obtained by the agencies listed above, in cooperation with the Oregon State Engineer, U. S. Forest Service, National Park Service and other Federal, State and local organizations. 1/

WATER SUPPLY OUTLOOK

The outlook for Oregon 1941 water supply varies widely through the State from poor to good.

The results of most recent snow surveys show for numerous watersheds that snowfall and precipitation have both been below normal during February, thus reducing the prospective water supply on those watersheds from that anticipated on February 1. On other watersheds the prospects appear better than last year and as good as during any of the past several years.

It is, of course, inadvisable to attempt any final prediction of summer water supplies until the main spring snow surveys become available on April 1, as much remains to happen during March. Nevertheless, the current snow shortage gives reason for concern in the irrigated areas of Jackson and Josephine Counties and the mid-Cascade area where reservoired supplies are low, in Wasco County, and in the northeastern part of the State.

Snow water content above 5,000 feet increased but little during February and averaged only slightly more than that of a year ago, was less than that of two years ago and was slightly less than that of three years ago. Between elevations of 2,000 and 5,000 feet, snow water content decreased slightly during February and at month's end averaged about the same as that of a year ago and was much below normal.

Watershed soils continue unfrozen and generally well wetted, thus favoring maximum release to streams and reservoirs of whatever snow pack may be accumulated at the beginning of the run-off season.

Total water stored in all reservoirs exceeds that of last year, but the number of reservoirs half full or better is the least for several years.

Precipitation accumulated in Oregon valleys since October 1 is somewhat less than for the same period last year, but in the south-central and southeastern parts is well above normal. In other sections it is not seriously below normal.

COMPARISON OF SNOW COVER AS OF MARCH FIRST WITH THAT OF PREVIOUS YEARS

For Oregon as a whole, and for elevations above 5,000 feet, of the 44 snow courses reporting, 30 were measured last month, 43 were measured about March 1, 1940, 38 were measured about March 1, 1939 and 29 were measured about March 1, 1938. Comparison of records on these courses for the approximate dates mentioned follows:

Snow cover (water content) now present above 5,000 feet:

As percent of that present one month ago ----	118
As percent of that present one year ago ----	114
As percent of that present two years ago ----	89
As percent of that present three years ago ----	96

For elevations from 2,000 to 5,000 feet, of the 32 snow courses and Copco water stations reporting about March 1, 1941, all were measured last month, 28 were measured about March 1, 1940, 27 were measured about March 1, 1939 and 23 were measured about March 1, 1938. Comparison of records on these courses for the approximate dates mentioned follows:

Snow cover (water content) now present from 2,000 to 5,000 feet:

As percent of that present one month ago ----	84
As percent of that present one year ago ----	106
As percent of that present two years ago ----	35
As percent of that present three years ago ----	41

Snow water content on 25 percent of all of the courses is less than at this time in 1940 and in 66 percent of the comparisons is less than on about February 1 of either 1939 or 1938.

STATUS OF SNOW COVER AS OF MARCH FIRST

SUMMARY OF SNOW SURVEY DATA BY TRIBUTARY DRAINAGES AS OF ABOUT MARCH FIRST

Tributary Drainage	Number of snow courses averaged	Average Water Depth in Snow Cover (Inches) 1941	1940	1939	1938	1941 Snow Water Depth (Inches) as Percent of that in 1940	1939	1938
Owyhee River	11	9.4	7.4			127		
	10	9.3		7.8			119	
	10	9.3			6.9			135
Malheur River	4	10.6	8.1			131		
	4	10.6		9.8			108	
	4	10.6			9.8			108
Burnt River	2	9.7	6.8			143		
	2	9.7		7.2			135	
	1	8.1			6.7			121
Powder River	5	12.7	12.8			99		
	5	12.7		13.5			94	
	2	10.6			12.8			83
Grande Ronde River	5	12.4	14.9			83		
	4	11.3		20.1			56	
	1	16.9			19.6			86
Walla Walla River	1	15.6	18.1			86		
	1	15.6		34.6			45	
	-	-			-			-
Umatilla River	4	7.6	9.9			77		
	4	7.6		18.2			42	
	2	2.6			6.0			43
John Day River	8	8.5	6.7			127		
	8	8.5		9.8			87	
	6	9.0			9.8			92
Crooked River	2	6.8	5.5			124		
	2	6.8		7.6			89	
	2	6.8			7.4			92
Sandy River	2	16.2	18.6			87		
	2	16.2		38.5			42	
	2	16.2			27.8			58
Clackamas River	1	2.9	5.8			50		
	1	2.9		13.7			21	
	1	2.9			10.2			28

		1941	1940	1939	1938	1940	1939	1938
Willamette River	1	13.3	9.6			138		
	1	13.3		37.0			36	
	-	-			-			-
Chewaucan River	1	7.9	6.0			132		
	1	7.9		5.4			146	
	-	-			-			-
Harney Basin	4	6.8	4.5			151		
	3	6.2		5.8			107	
	2	6.8			5.0			136
Guano Lake	1	6.6	4.2			157		
	-	-		-			-	
	-	-			-			-
Umpqua River	4	6.5	5.5			118		
	4	6.5		17.8			36	
	1	12.8			18.2			70
Upper Rogue River	10	7.6	7.8			97		
	10	7.6		15.2			50	
	8	9.5			16.9			56
Applegate River	1	12.4	14.3			87		
	1	12.4		14.5			85	
	1	12.4			16.7			74
Illinois River	1	3.7	2.9			128		
	-	-		-			-	
	-	-			-			-
Klamath Lake Basin	*19	8.0	5.8			138		
	*19	8.0		9.6			83	
	*17	8.4			10.8			78
Goose Lake Basin	* 2	8.4	4.0			210		
	* 2	8.4		6.8			123	
	* 1	8.7			8.8			99

*Including Copco water measurement stations.

STATUS OF RESERVOIR STORAGE AS OF MARCH FIRST

In the following tabulation, water storage in acre feet in important Oregon reservoirs as of about March 1, 1941 is compared with storage as of February 1, 1941, as well as with storage as of approximately March 1 of 1940, 1939 and 1938.

Storage Reservoir	Stream Basin	Capacity Acre Ft.	Acre Feet in Storage About 3-1-41	About 2-1-41	About 3-1-40	About 3-1-39	About 3-1-38
Agency Valley	Malheur	60,000	48,240	43,640	50,820	44,120	27,670
Antelope	Owyhee	33,434	15,000	3,707	Empty	3,900	14,000
Clear Lake	Lost River	440,240[b]	245,200[b]	204,920[b]	241,480[b]	230,160[b]	120,160[b]
Crane Prairie	Deschutes	55,336[c]	23,000	18,940	37,000[a]	30,800	40,235
Crescent Lake	Deschutes	80,000	22,700	22,700	31,480	56,760[e]	33,680
Drew Creek	Goose Lake	62,500	30,900	29,400	42,790	33,390	42,460
Emigrant Gap	Rogue	8,200	Full	6,487	Full	2,716	6,704
Fish Lake	Rogue	7,720	3,604	3,280	4,430	6,127	4,350
Four Mile Lake	Klamath[d]	14,000	2,988	2,303	7,826	10,394	11,767
Gerber	Klamath	94,000[b]	50,880[b,f]	44,330[b]	59,220[b]	36,370[b]	35,050[b]
Hyatt Prairie	Klamath[d]	16,000	3,055	2,417	4,400	10,810	7,665
McKay	Umatilla	75,000	29,100	24,980	32,840	30,110	30,790
Ochoco	Crooked	47,500	5,780	3,620	4,060	21,900	14,710
Owyhee	Owyhee	715,000	594,570	453,780	464,170	534,020	600,000[e]
Thief Valley	Powder	17,400	Full [a]	16,070	11,912	11,045	17,400
Upper Klamath Lake	Klamath	524,800[b]	327,700[b]	233,000[b]	383,500[b]	405,400[b]	421,800[b]
Wallowa Lake	Wallowa	40,920	18,070	16,960	11,710	36,960	14,610
Warm Springs	Malheur	170,000	127,000	110,000	85,500	141,600	42,250
Willow Creek	Malheur	26,000	4,800	4,250	600[e]	4,000[a]	750

a - Estimated
b - Available for use
c - 40,500 by agreement
d - By ditch to Rogue River side
e - Approximate
f - 7,830 wasted during February

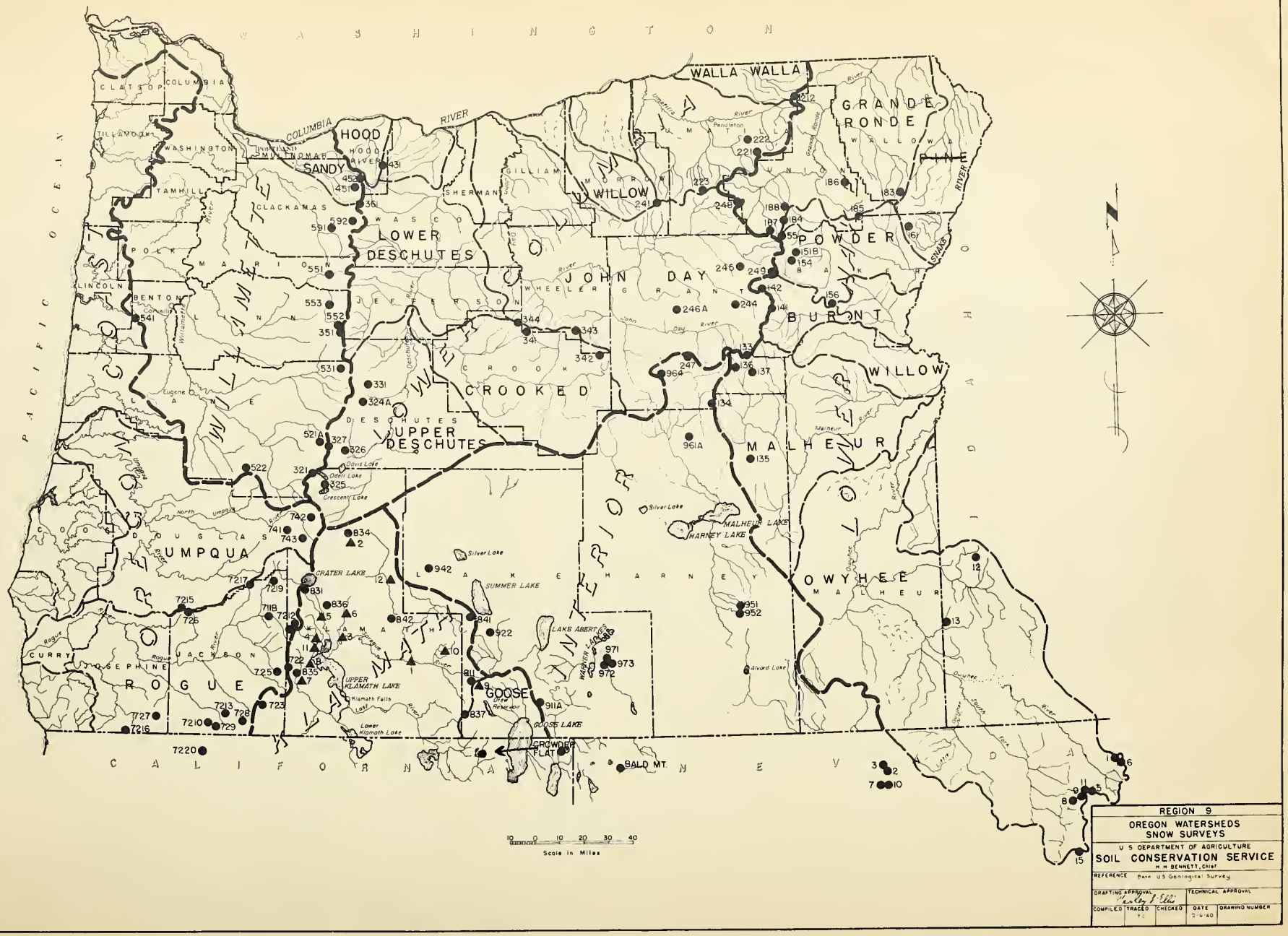
STATUS OF VALLEY PRECIPITATION AS OF OCTOBER 1 TO DATE

Month	Oct.		Nov.		Dec.		Jan.		Feb.		Period	
Section	P	D	P	D	P	D	P	D	P	D	P	D
S. E.	2.22	+1.57	1.00	+0.12	0.74	-0.16	2.0	+0.9	1.7	+0.8	7.66	+3.23
S. C.	1.71	+0.70	1.44	-0.15	2.00	+0.17	2.7	+0.8	2.2	+0.8	10.05	+2.32
N. C.	0.94	+0.13	1.07	-0.39	1.11	-0.42	1.7	-0.1	1.3	+0.1	6.12	-0.68
Col. Riv.	1.61	+0.64	1.80	+0.09	1.15	-0.45	1.4	-0.2	1.0	-0.4	6.96	-0.32
Wal. Mts.	2.55	+1.21	2.10	+0.09	1.17	-0.78	0.3	-1.4	1.1	-0.5	7.22	-1.38
Blue Mts.	2.62	+1.10	2.45	+0.34	1.23	-0.88	1.2	-0.9	1.8	0.0	9.30	-0.34
Southern	1.76	-0.02	2.92	-0.92	4.19	+0.65	2.4	-1.4	2.5	-0.7	13.77	-2.39
Willamette	5.14	+1.10	7.13	-1.05	6.19	-1.83	5.8	-1.7	1.8	-4.3	26.06	-7.78
Area	2.32	+0.80	2.49	-0.23	2.22	-0.46	2.2	-0.5	1.7	-0.5	10.89	-0.92

P - Inches precipitation. D - Inches departure from normal.

S. E. - Southeastern Oregon range lands, Harney and Malheur Counties.
S. C. - Southcentral Oregon range lands, Lake County and Klamath County, except the Cascade Mountains.
N. C. - Northcentral Oregon wheat and range lands, Crook, Deschutes, Jefferson, Wheeler and part of Grant Counties.
Col. Riv. - Columbia River area, wheat and range lands, Gilliam, Morrow, Sherman, Wasco and part of Umatilla Counties.
Wal. Mts. - Wallowa Mountain area, forest and range lands, Wallowa and part of Baker County.
Blue Mts. - The Blue Mountain forest and range area, Union and parts of Baker, Grant and Umatilla Counties.
Southern - Southern Oregon irrigated section, Jackson and Josephine Counties.
Willamette - Parts of Polk, Benton, Yamhill, Washington, Lane and all of Linn, Marion, Clackamas and Multnomah Counties.

Note: Data for the last two months shown above are preliminary only, as they are based on a few stations only. Data for earlier months have been corrected to include all the stations in climatological data for the area.



REGION 9

OREGON WATERSHEDS
SNOW SURVEYS

U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H H BENNETT, Chief

REFERENCE Base U S Geological Survey

DRAFTING APPROVAL			TECHNICAL APPROVAL	
COMPILED	TRACED	CHECKED	DATE	DRAWING NUMBER
	TC		2-6-40	

INDEX TO SNOW COURSES

Number	Name	Elev.
	UPPER COLUMBIA DRAINAGE	
	Lower Snake in Oregon	
	OWYHEE RIVER	
Nev.1	Big Bend	6800
Nev.2	Buckskin, Lower	6800
Nev.3	Buckskin, Upper	8200
952	Fish Creek	7900
Nev.5	Fry Canyon	6800
Nev.6	Gold Creek Ranger Sta.	6600
Nev.7	Granite Peak	8600
Nev.8	Jack Creek, Lower	7000
Nev.9	Jack Creek, Upper	7800
Nev.10	Martin Creek	7000
Nev.11	Rodeo Flat	7000
Ida.12	Silver City	6400
951	Silvies	6900
Ida.13	South Mountain	5100
Nev.15	Taylor Canyon	5200
	MALHEUR RIVER	
133	Blue Mountain Spring	5900
137	Crane Prairie	5375
136	Lake Creek	5120
134	Rock Spring	5100
135	Stinking Water	4800
	BURNT RIVER	
141	Blue Mountain Summit	5098
156	Dooley Mountain	5430
142	Tipton	5100
	POWDER RIVER	
155	Anthony Lake	7125
154	Bourne	5800
156	Dooley Mountain	5430
151B	Eilertson Meadows	5400
249	Gold Center	5340
184	Summit Springs	6000
185	Taylor Green	5740
	PINE CREEK	
161	Schneider Meadows	5400
	GRANDE RONDE RIVER	
183	Aneroid Lake	7480
155	Anthony Lake	7125
188	Beaver Reservoir	5340
187	Camp Carson	5970
186	Moss Spring	5860
248	Schoolmarm	4775
184	Summit Springs	6000
185	Taylor Green	5740
212	Tollgate	5070

Number	Name	Elev.
	LOWER COLUMBIA DRAINAGE	
	WALLA WALLA RIVER	
212	Tollgate	5070
	UMATILLA RIVER	
222	Emigrant Springs	3925
223	Lucky Strike	5050
221	Meacham	4300
212	Tollgate	5070
	WILLOW CREEK	
241	Arbuckle Mountain	5400
	JOHN DAY RIVER	
241	Arbuckle Mountain	5400
246A	Beech Creek Summit	4800
133	Blue Mountain Spring	5900
141	Blue Mountain Summit	5098
244	Dixie Springs	6650
249	Gold Center	5340
964	Izee Summit	5293
245	Olive Lake	6000
248	Schoolmarm	4775
247	Starr Ridge	5156
	DESCHUTES RIVER	
326	Caldwell Ranch	4400
321	Cascade Summit	4880
327	Charlton Lake	5750
361	Clear Lake	3500
325	Crescent Lake	4760
343	Derr	5670
351	Hogg Pass	4755
344	Marks Creek	4540
324A	New Dutchman Flat	6400
341	Ochoco Meadows	5200
342	Tamarack	4800
331	Three Creeks Meadows	5600
	HOOD RIVER	
431	Brooks Meadows	4300
	SANDY RIVER	
361	Clear Lake	3500
452	Phlox Point - Mt. Hood	5600
451	Still Creek	3700
	CLACKAMAS RIVER	
592	Clackamas Lake	3400
591	Peavine Ridge	3500
	WILLAMETTE RIVER	
551	Breitenbush	2535
321	Cascade Summit	4880
522	Champion	4500
327	Charlton Lake	5750
351	Hogg Pass	4755
531	McKenzie	4800
553	Marion Forks	2730
541	Mary's Peak	3620
552	Santiam Junction	3990
521A	Waldo Lake	5500

Number	Name	Elev.
	KLAMATH LAKE BASIN	
831	Annie Spring	6018
722	Billie Creek Divide	6000
834	Chemult No. 1	4760
Calif.	Crowder Flat	5200
723	Hyatt Prairie Reeervoir	4900
835	Lake of the Woods	4960
811	Quartz Mountain	5320
7211	Seven Lakes No. 1	6800
7212	Seven Lakes No. 2	6200
~~7220~~	~~Scragg Mountain~~	~~6200~~
837	Strawberry	5600
841	Summer Rim	7200
836	Sun Mountain	5350
842	Taylor Butte	5100
	GOOSE LAKE BASIN	
911A	Camas Creek	5720
811	Quartz Mountain	5320
837	Strawberry	5600

INDEX TO CALIFORNIA-OREGON POWER COMPANY SNOW WATER STATIONS

	KLAMATH LAKE BASIN	
1	Beatty	4300
2	Chemult	4761
3	Chiloquin	4187
4	Crystal	4200
5	Fort Klamath	4150
6	Kirk	4533
7	Lake of the Woods	4960
8	Pelican	4200
9	Quartz Mountain	5504
10	Richardson Ranch	4800
11	Rocky Point	4150
12	Yamsey	4600
	GOOSE LAKE BASIN	
9	Quartz Mountain	5504

Number	Name	Elev.
	INTERIOR DRAINAGE	
	SILVER LAKE	
942	Silver Creek	4900
	CHEWAUCAN RIVER	
922	Mill Creek	6200
	HARNEY BASIN	
973	Deer Creek	6670
952	Fish Creek	7900
971	Hart Mountain	6350
961A	Idylwild Park	5200
964	Izee Summit	5293
134	Rock Spring	5100
951	Silvies	6900
247	Starr Ridge	5156
	WARNER LAKE	
911A	Camas Creek	5720
	GUANO LAKE	
Nev.	Bald Mountain	6720
972	Guano Creek	6480
	WEST COAST DRAINAGE	
	UMPQUA RIVER	
522	Champion	4500
743	Diamond Lake	5315
726	Goolaway Gap	3000
7215	Gollaway Mountain	3730
742	N.Umpqua near Lake Creek	4215
741	Trap Creek	3800
7217	Whaleback	5140
	ROGUE RIVER	
7216	Althouse	4400
831	Annie Spring	6018
729	Big Red Mountain	6500
722	Billie Creek Divide	6000
725	Fish Lake	4865
726	Goolaway Gap	3000
7215	Goolaway Mountain	3730
727	Grayback Peak	6000
723	Hyatt Prairie Reservoir	4900
7210	Little Red Mountain	6500
7211	Seven Lakes No. 1	6800
7212	Seven Lakes No. 2	6200
7219	Silver Burn	3720
728	Siskiyou Summit	4630
7218	South Fork Canal	3500
7213	Wagner Butte	6900
7217	Whaleback	5140
7220	SCRAGG MOUNTAIN	6200

TRIBUTARY BASINS (Primary & Secondary & Snow Courses)	Oregon Number	LOCATION Sec.	Twp.	Range	Elev.	SNOW COVER MEASUREMENTS About March 1, 1941 Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	AVERAGE WATER DEPTH (INCHES) One Month ago (2-1-41)	One Year ago (3-1-40)	Two Years ago (3-1-39)	Three Years ago (3-1-38)
UPPER COLUMBIA DRAINAGE												
LOWER SNAKE IN OREGON												
OWYHEE RIVER												
Granite Peak	Nev.	27	44N	39E	8600	3-3	45.0	15.7	-	15.0	12.8	13.5
Upper Buckskin	Nev.	14	45N	39E	8200	3-1	35.8	13.4	-	10.8	8.0	7.2
Upper Jack Creek	Nev.	9	42N	53E	7800	3-1	27.9	9.0	-	8.9	12.9	4.5
Lower Jack Creek	Nev.	19	42N	53E	7000	3-1	10.1	4.2	-	1.3	7.9	2.4
Martin Creek	Nev.	24	44N	39E	7000	2-28	24.6	7.8	-	6.8	5.9	8.1
Rodeo Flat	Nev.	31	43N	54E	7000		N.R.	N.R.	-	7.5	11.0	6.5
South Mountain No. 2	Idaho		7S	5W	7000	3-5	28.7	11.0	8.4	-	-	-
Big Bend	Nev.	30	45N	56E	6800	3-1	29.4	9.9	-	6.4	7.2	8.2
Fry Canyon	Nev.	32	43N	54E	6800		N.R.	N.R.	-	6.5	10.2	7.2
Lower Buckskin	Nev.	25	45N	39E	6800	3-2	25.9	8.4	-	5.8	6.8	8.1
Gold Creek Ranger Station	Nev.	32	45N	56E	6600	3-1	20.1	6.2	-	4.7	4.5	4.8
Silver City	Idaho	6	5S	3W	6400	3-1	25.0	9.9	8.4	9.4	6.4	7.1
Taylor Canyon	Nev.	32	39N	53E	5200	3-1	21.2	8.2	-	3.0	5.6	4.9
MALHEUR RIVER												
Blue Mountain Spring	133	21	15S	35E	5900	Abt.3-1	42.0	14.0	13.4	10.3	13.9	19.0
Crane Prairie	137	24	16S	34E	5375	Abt.3-1	30.5	9.3	-	6.9	10.1	8.1
Lake Creek	136	10	16S	33½E	5120	Abt.3-1	35.5	12.8	-	9.0	11.2	9.0
Rock Spring	134	23	18S	32E	5100		N.R.	N.R.	7.6	5.4	5.8	5.5
Stinking Water	135	33	21S	34E	4800	2-28	18.5	6.5	4.9	6.3	3.8	3.0
BURNT RIVER												
Dooley Mountain	156	32	11S	40E	5430	3-3	33.0	11.3	9.0	8.2	5.3	-
Blue Mountain Summit	141	6	12S	36E	5098	2-28	29.4	8.1	5.3	5.4	9.2	6.7

TRIBUTARY BASINS (Primary & Secondary & Snow Courses)	Oregon Number	LOCATION Sec.	Twp.	Range	Elev.	SNOW COVER MEASUREMENTS About March 1, 1941 Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	AVERAGE WATER DEPTH (INCHES) One Month ago (2-1-41)	One Year ago (3-1-40)	Two Years ago (3-1-39)	Three Years ago (3-1-38)
POWDER RIVER												
Anthony Lake	155	18	7S	37E	7125	2-28	56.1	20.2	15.8	19.0	21.8	-
Bourne	154	33	8S	37E	5800	2-27	44.1	10.6	10.5	13.0	12.9	14.1
Dooley Mountain	156	32	11S	40E	5430	3-3	33.0	11.3	9.0	8.2	5.3	-
Eilertson Meadows	151B	18	8S	38E	5400	2-27	35.1	10.6	7.3	13.2	15.1	11.5
Gold Center	249	21	9S	36E	5340	3-3	33.1	11.0	8.4	10.4	12.6	-
GRANDE RONDE RIVER												
Anthony Lake	155	18	7S	37E	7125	2-28	56.1	20.2	15.8	19.0	21.8	-
Moss Spring	186	27	3S	41E	5860	2-27	54.8	16.9	13.9	18.0	-	19.6
Beaver Reservoir	188	8	5S	37E	5340	2-28	29.8	6.8	14.7	17.3	16.6	-
Schoolmarm	248	28	4S	34E	4775	2-28	9.3	2.7	2.0	2.1	7.3	-
LOWER COLUMBIA DRAINAGE												
WALLA WALLA RIVER												
Tollgate	212	32	4N	38E	5070	2-25	48.1	15.6	14.1	18.1	34.6	-
UMATILLA RIVER												
Tollgate	212	32	4N	38E	5070	2-25	48.1	15.6	14.1	18.1	34.6	-
Lucky Strike	223	28	3S	32E	5050	2-26	34.7	9.7	8.3	8.3	14.5	-
Meacham	221	24&25	1S	35E	4300	2-24	15.2	3.6	4.0	7.5	13.3	6.7
Emigrant Springs	222	29	1N	35E	3925	2-24	5.4	1.6	2.7	5.8	10.4	5.2
WILLOW CREEK												
Arbuckle Mountain	241	33	4S	29E	5400	2-27	31.0	9.3*	8.6*	-	-	-

*Average of first and fourth 500 foot course sections.

TRIBUTARY BASINS (Primary & Secondary & Snow Courses)	LOCATION Oregon Number	Sec.	Twp.	Range	Elev.	SNOW COVER MEASUREMENTS About March 1, 1941 Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	AVERAGE WATER DEPTH (INCHES) One Month ago (2-1-41)	One Year ago (3-1-40)	Two Years ago (3-1-39)	Three Years ago (3-1-38)
JOHN DAY RIVER												
Olive Lake	245	14	9S	33½E	6000	2-27	41.7	13.3	10.5	12.2	13.5	16.2
Blue Mountain Spring	133	21	15S	35E	5900	Abt.3-1	42.0	14.0	13.4	10.3	13.9	19.0
Arbuckle Mountain	241	33	4S	29E	5400	2-27	31.0	9.3*	8.6*	-	-	-
Gold Center	249	21	9S	36E	5340	3-3	33.1	11.0	8.4	10.4	12.6	-
Izee Summit	964	28	16S	29E	5293	2-26	27.2	7.7	5.8	5.2	9.1	6.7
Starr Ridge	247B	20	15S	31E	5150	2-26	20.9	5.8	4.7	3.8	5.6	3.3
Blue Mountain Summit	141	6	12S	36E	5098	2-28	29.4	8.1	5.3	5.4	9.2	6.7
Beech Creek Summit	246A	4	12S	30E	4800	2-27	16.8	5.2	3.8	4.5	7.6	6.9
Schoolmarm	248	28	4S	34E	4775	2-28	9.3	2.7	2.0	2.1	7.3	-
DESCHUTES RIVER												
Ochoco Meadows	341	21	13S	20E	5200	2-28	29.8	9.8	8.6	8.0	9.6	10.0
Hogg Pass	351	24	13S	7½E	4755	3-2	54.2	21.4	17.2	-	-	-
Marks Creek	344	25	12S	19E	4540	2-27	11.7	3.9	3.6	3.1	5.6	4.8
Clear Lake	361	29	4S	9E	3500	3-1	9.2	3.2	5.1**	-	-	-
SANDY RIVER												
Phlox Point - Mt. Hood	452	6	3S	9E	5600	3-1	64.0	27.2	24.6	29.6	54.7	42.8
Still Creek	451	25	3S	8½E	3700	3-1	13.6	5.3	5.6	7.6	22.4	12.8
Clear Lake	361	29	4S	9E	3500	3-1	9.2	3.2	5.1**	-	-	-
CLACKAMAS RIVER												
Peavine Ridge	591	14&15	6S	7E	3500		N.R.	N.R.	4.5	7.6	19.2	13.0
Clackamas Lake	592	35	5S	8½E	3400	2-28	7.8	2.9	3.6	5.8	13.7	10.2

*Average of first and fourth 500 foot course sections.
**Entire course length of 3,000 feet was not measured.

TRIBUTARY BASINS (Primary & Secondary & Snow Courses)	Oregon Number	LOCATION Sec.	Twp.	Range	Elev.	SNOW COVER MEASUREMENTS About March 1, 1941 Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	AVERAGE WATER DEPTH (INCHES) One Month ago (2-1-41)	One Year ago (3-1-40)	Two Years ago (3-1-39)	Three Years ago (3-1-38)
WILLAMETTE RIVER												
Hogg Pass	351	24	13S	7½E	4755	3-2	54.2	21.4	17.2	-	-	-
Champion	522	12	23S	1E	4500	2-28	30.2	13.3	13.6	9.6	37.0	-
Santiam Junction	552	14	13S	7E	3990	3-2	11.6	4.6	6.2	-	-	-
Marion Forks	553	28	11S	7E	2730	3-2	0.0	0.0	1.8	-	-	-
Breitenbush	551	21	9S	7E	2325	2-28	0.0	0.0	0.0	-	-	-
INTERIOR DRAINAGE												
CHEWAUCAN RIVER												
Mill Creek	922	1	34S	17E	6200	2-27	27.4	7.9	-	6.0	5.4	-
HARNEY BASIN												
Deer Creek	973	17	36S	26E	6670	3-3	29.8	8.6	4.8	6.1	-	-
Hart Mountain	971	1	36S	25E	6350	2-25	17.0	5.1	3.4	2.8	2.8	-
Izee Summit	964	28	16S	29E	5293	2-26	27.2	7.7	5.8	5.2	9.1	6.7
Idylwild Camp	961A	33	20S	31E	5200		N.R.	N.R.	5.2	4.3	5.9	6.1
Starr Ridge	247B	20	15S	31E	5150	2-26	20.9	5.8	4.7	3.8	5.6	3.3
Rock Spring	134	23	18S	32E	5100		N.R.	N.R.	7.6	5.4	5.8	5.5

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GUANO LAKE												
Bald Mountain	Nev.	17	45N	21E	6720	2-27	21.6	5.9	-	2.9	-	-
Guano Creek	972	13	36S	25E	6480	2-26	26.6	7.3	4.7	5.6	-	-
WEST COAST DRAINAGE												
UMPQUA RIVER												
Diamond Lake	743	29	27S	6E	5315	2-27	35.9	12.8	10.5	9.6	18.2	18.2
Champion	522	12	23S	1E	4500	2-28	30.2	13.3	13.6	9.6	37.0	-
Goolaway Mountain	7215	30	32S	3W	3730	2-26	Trace	Trace	1.6	2.1	10.9	-
Goolaway Gap	726	32	32S	3W	3000	2-26	0.0	0.0	0.0	0.6	4.9	-
ROGUE RIVER												
Wagner Butte	7213	1	40S	1W	6900	2-28	36.8	12.4	10.5	14.3	14.5	16.7
Scragg Mountain	7220	9	47N	10W	6200	2-27	66.0	26.4	21.2	-	-	-
Annie Spring	831	19	31S	6E	6018	2-28	103.5	39.9	36.8	38.0	34.0	41.6
Billie Creek Divide	722	30	36S	5E	6000	2-26	36.0	13.5	10.8	10.8	27.8	18.4
Hyatt Prairie Reservoir	723	15	39S	3E	4900	2-26	20.0	7.2	5.8	4.5	11.9	12.6
Fish Lake	725	3	37S	4E	4865	2-28	7.9	2.8	4.2	2.7	17.1	11.6
Siskiyou Summit	728	17	40S	2E	4630	3-1	0.0	0.0	4.4	3.0	6.6	11.3
Althouse	7216	17	41S	7W	4400	3-1	9.6	3.7	6.4	2.9	-	-
Goolaway Mountain	7215	30	32S	3W	3730	2-26	Trace	Trace	1.6	2.1	10.9	-
Silver Burn	7219	30	30S	4E	3720	2-28	Trace	Trace	5.7	2.5	15.6	16.1
South Fork Canal	7218	12	33S	3E	3500	2-28	0.0	0.0	0.0	0.0	9.0	6.8
Goolaway Gap	726	32	32S	3W	3000	2-26	0.0	0.0	0.0	0.6	4.9	-

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KLAMATH LAKE BASIN												
Summer Rim	841	15	33S	16E	7200	3-3	42.3	13.6	-	12.6	9.2	15.2
Annie Spring	831	19	31S	6E	6018	2-28	103.5	39.9	36.8	38.0	34.0	41.6
Billie Creek Divide	722	30	36S	5E	6000	2-26	36.0	13.5	10.8	10.8	27.8	18.4
Strawberry	837	4	40S	16E	5600	3-1	24.0	8.7	6.6	5.0	8.7	8.8
Quartz Mountain 2/		33	37S	16E	5504		N.R.	N.R.	5.8	3.8	6.9	10.5
Sun Mountain	836	22	32S	7½E	5350	2-26	73.3	26.3	20.0	21.0	22.9	24.4
Quartz Mountain	811	2	38S	16E	5320	2-26	23.0	8.2	5.0	3.1	4.8	-
Crowder Flat(California)		30	47N	11E	5200	3-1	0.6	0.3	3.3	Trace	3.6	-
Lake of the Woods No. 1	835	11	37S	5E	4960	2-28	17.3	5.6	5.0	2.8	9.6	10.2
Hyatt Prairie Reservoir	723	15	39S	3E	4900	2-26	20.0	7.2	5.8	4.5	11.9	12.6
Richardson Ranch 2/		22	35S	14E	4800	2-28	0.0	0.0	1.2.	0.0	2.1	3.2
Chemult No. 1	834	21	27S	8E	4760	3-1	26.1	8.4	8.1	8.0	8.7	12.5
Yamsey 2/		19	30S	11E	4600	2-28	0.0	0.0	1.4	0.0	1.9	3.0
Kirk 2/		1	33S	7E	4533	2-28	19.0	8.8	7.2	0.0	8.5	7.0
Beatty 2/		22	36S	12E	4300	2-28	0.0	0.0	0.0	0.0	0.0	0.0
Crystal 2/		26	34S	6E	4200	2-28	22.0	8.2	8.0	5.2	9.0	6.5
Pelican 2/		10	36S	6E	4200	2-28	6.5	2.5	1.8	0.0	5.9	4.0
Chiloquin 2/		34	34S	7E	4187	2-28	0.0	0.0	1.6	0.0	3.2	4.4
Fort Klamath 2/		22	33S	7½E	4150	2-28	0.0	0.0	6.6	0.0	6.1	8.6
Rocky Point 2/		26	35S	6E	4150	2-28	0.0	0.0	2.9	0.0	4.8	4.2
GOOSE LAKE BASIN												
Strawberry	837	4	40S	16E	5600	3-1	24.0	8.7	6.6	5.0	8.7	8.8
Quartz Mountain 2/		33	37S	16E	5504		N.R.	N.R.	5.8	3.8	6.9	10.5
Quartz Mountain	811	2	38S	16E	5320	2-26	23.0	8.2	5.0	3.1	4.8	-

1/ The snow measurements are made principally by field personnel of the following organizations:

STATE
- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon Agricultural Experiment Station
- Oregon State Engineer and corps of State Watermasters
- Oregon State Highway Engineers

FEDERAL
- Department of Agriculture
  - Forest Service
  - Soil Conservation Service
- Department of Commerce
  - Weather Bureau
- Department of Interior
  - Bureau of Reclamation
  - Fish and Wildlife Service
  - Geological Survey
  - Indian Service
  - National Park Service

PUBLIC UTILITIES
- Eastern Oregon Light and Power Company
- Portland General Electric Company
- The California Oregon Power Company

MUNICIPALITIES
- City of Corvallis
- City of La Grande
- City of The Dalles

MUNICIPAL DISTRICTS
- Central Oregon Irrigation District
- Deschutes County Municipal Improvement District
- Grants Pass Irrigation District
- Jordan Valley Irrigation District
- Lakeview Water Users' Association
- Medford and Rogue River Irrigation Districts
- Ochoco Irrigation District
- Warmsprings Irrigation District

2/ Water content determined by melting a measured sample. (The California Oregon Power Company's station.)

3/ N. R. = No report.